

REMARKS

Upon entry of the present amendment, claims 7 and 21-22 are pending in the instant application. Claims 8-10 and 23 have been cancelled herein without prejudice or disclaimer. No further claim amendments have been presented herein. Accordingly, no new matter has been added by this filing.

Applicant notes with appreciation that the following objections and rejections have been withdrawn: the objections to the specification; the rejections under 35 U.S.C. § 112, second paragraph; and the rejection under 35 U.S.C. § 102(e).

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Enablement

Claims 7, 9-10 and 21-23 have been rejected under 35 U.S.C. § 112, first paragraph for lack of enablement. According to the Examiner, the claims are not enabled because “the specification fails to show any CSA polypeptides, including SEQ ID NO:2, are in fact differentially over-expressed in chondrosarcoma cells as compared to normal cartilage cells.” (Office Action, page 4).

Claim 7 recites an isolated chondrosarcoma associated (CSA) polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:2, claim 21 is directed to a fragment of the polypeptide of SEQ ID NO:2 for use as an immunogen, wherein the fragment consists of the amino acid sequence of SEQ ID NO:8.

Applicant notes that claims 9, 10 and 23 have been cancelled, thereby obviating any rejection of these claims. Applicant submits that the remaining claims, *i.e.*, claims 7 and 21-22 are fully enabled by the as-filed specification. As acknowledged by the Examiner on page 4 of the Office Action, the specification “teaches how to make the CSA polypeptides.” Moreover, the specification explicitly discloses that the CSA-1 polypeptide, *i.e.*, the amino acid sequence of SEQ ID NO:2, is expressed in chondrosarcoma cells:

Expression of CSA-1 in chondrosarcoma cells was localized to the nucleus of the cell by immunostaining using a rabbit polyclonal antibody specific for a CSA-1 polypeptide. (See specification at page 17, lines 18-21).

Thus, the expression of the *csa-1* mRNA in chondrosarcoma cells does, in fact, correlate to CSA-1 polypeptide expression in the same population of cells.

As described throughout the specification and shown in the Examples, the mRNA for the *csa-1* gene is not expressed in normal cartilage cells. (*See e.g.*, specification at page 7, lines 10-12; at page 13, lines 1-9; and at page 15, line 21 through page 17, line 3). Thus, the ordinarily skilled artisan would appreciate that if mRNA is not expressed in normal cartilage cells, the corresponding encoded protein is also not expressed in that cell population.

Thus, the as-filed specification demonstrates that the CSA-1 polypeptide is differentially expressed in chondrosarcoma cells as compared to normal cartilage cells. As such, Applicant submits that a person of ordinary skill in the art, with the specification in hand and given the state of the art at the time of filing, could make and use the claimed CSA polypeptides without undue experimentation. Accordingly, Applicant requests that this rejection be withdrawn.

Written Description


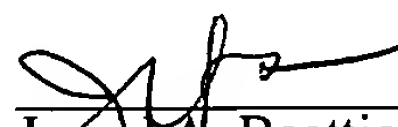
Claims 9, 10 and 23 have been rejected under 35 U.S.C. § 112, first paragraph for lack of written description. In particular, the Examiner has indicated that the “the written description is not commensurate in scope with the claims which read on any and all peptides that are 90% identical to SEQ ID NO:2 and are differentially expressed in chondrosarcoma and normal cells.” (Office Action, page 5).

Claims 9, 10 and 23 have been cancelled herein. Thus, all rejections of these claims have been rendered moot and should be withdrawn.

CONCLUSION

On the basis of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

  Reg. No. 42,306
Ingrid A. Beattie, Reg. No. 42,306
Attorney for Applicants
c/o MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY & POPEO, P.C.
Tel: (617) 542-6000
Fax: (617) 542-2241
Customer No. 30623